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ABSTRACT

The Social and Rehabilitation Service (SRS) has developed the Research Information System (RIS), a central information base which evolved from research and demonstration (R&D) programs sponsored over the years by SRS. It was specifically designed for use by the practitioner rather than by the formal researcher in an area of special investigation. The system is a key to some of the answers to problems that practitioners face today. By using it, persons concerned with decision-making and service delivery can acquaint themselves with a great variety of alternatives which are applicable to their responsibilities. RIS contains, in printed copy and in microfiche, the final reports of all SRS research projects as well as abstracts of those reports and a general index. The system has been evaluated and field tested throughout the United States. Because of their standardized format, compact size, and representation of total SRS research, the abstracts and microfiche lend themselves to ready usage. They constitute a nucleus of informational materials which will be expanded and refined as the R&D program continues. In this manual, techniques for use, system components, and target groups are treated in detail. (The SRS Thesaurus is available as LI 004305.) (Author/NH)

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INSTRUCTION MANUAL

A GUIDE TO THE USE OF THE SRS RESEARCH INFORMATION SYSTEM

Prepared by the
Research Utilization Laboratory
ICD Rehabilitation and Research Center

Edited by the
Division of Research Utilization

U.S. DEPARTMENT OF HEALTH,
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Office of Research and Demonstrations
Division of Research Utilization
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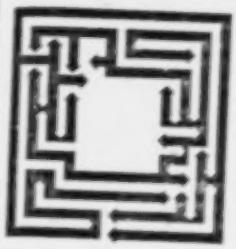


FOREWORD

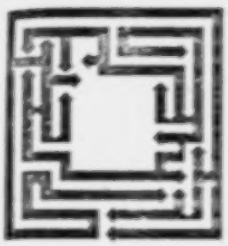
Research is worthwhile only if the results of it are used. What good are the final reports of research projects if they remain on the library shelf, their existence unknown to counselors, practitioners, and administrators—the very people who could put their findings to use? How can these people change and improve the lives of their clients unless they are given an opportunity to learn of the new ideas and techniques developed through our research programs?

In 1970 the Social and Rehabilitation Service, weighing these questions against the great volume of information its research projects were generating, began to think about the need for an information system which would promote the use of research results and thereby improve services. Out of that concept gradually emerged the SRS Research Information System, step one of which is described herein.

Simultaneously with the publication of this *Instruction Manual*, SRS is publishing the *SRS Research Information System Index*, the *SRS Research Information System Thesaurus*, and the *SRS Research Information System Abstracts*. These four documents will guide the searcher safely through the labyrinth of knowledge which constitutes the first phase of the SRS Research Information System.

By the end of 1973, a larger, more inclusive computerized version of the system will be developed. It will include three on-line computer-based interactive training programs and a flexible capacity for manipulating and formatting extracted data. Later, the entire SRS Research Information System will be integrated with the SRS Management Information System.

GEORGE A. ENGSTROM
Chief
Division of Research Utilization



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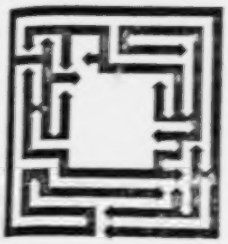

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I. SRS RESEARCH INFORMATION SYSTEM: AN INTRODUCTION

Since the inception of rehabilitation research, vocational rehabilitation practitioners have become increasingly aware of the role that applied research can play in broadening services. They are aware, too, that the great demand for research today stems from the assumption that current practices are not the final answer to optimal provision of services. Many practitioners, however, have neither the time nor the resources to do intensive research themselves, yet research results are often vital to their work.

With this in mind, the Social and Rehabilitation Service (SRS) has developed the Research Information System (RIS), a central information base which evolved from research and demonstration (R&D) programs sponsored over the years by SRS. It was specifically designed for use by the practitioner rather than by the formal researcher in an area of special investigation. The system is a key to some of the answers to problems that practitioners face today. By using it, persons concerned with decision-making and service delivery can acquaint themselves with a great variety of alternatives which are applicable to their responsibilities.

Rehabilitation agencies likewise are faced with an ever-increasing demand for services, yet all too often they receive but little increase in resources. The solution lies in *increased efficiency* rather than in expansion of *less-than-optimal services*. This is an era of rapid change, and a knowledge of relevant research results can be used to direct that change. Such knowledge often prevents unnecessary duplication and error. It may save time, money, and client self-esteem and increase public understanding of the rehabilitation task.

Of course, research findings having the most potential for practice are those which emerge from the work of researchers with direct ties to the world of the practitioner and client. Such researchers strike a balance between sophisticated methodology and pragmatism. A research-based program implies that consumers, including rehabilitation counselors, administrators, workshop personnel, and social workers, have a need for new knowledge, are capable of understanding the results of research efforts, would act on the basis of new information if they had it, and would continue to evaluate their need for new information. It is true that some consumers are reluctant to change, but knowledge of useful research results often creates a willingness to try new procedures.

The Research Information System, therefore, was organized to bring the researcher and the practitioner together. Through RIS the practitioner can learn what is being done throughout the world in his particular areas of interest. Furthermore, even though it is impossible for him to become an expert on every disability that confronts him, he can, by consulting RIS, benefit from the expertise of researchers in many diversified fields.

RIS contains, in printed copy and in microfiche, the final reports of all SRS research projects as well as abstracts of those reports and a general index. The system has been evaluated and field tested throughout the United States. For example, abstracts of research studies and microfiche of completed final reports were sent to the Regional Rehabilitation Research Institutes (RRRI), the Research Utilization Specialists (RUS) in State vocational rehabilitation agencies, and the Research Utilization Laboratories (RUL) for field testing among practitioners in public and private rehabilitation and welfare agencies.

The abstracts and microfiche, because of their standardized format, compact size, and representation of total SRS research, lend themselves to ready usage. They constitute a nucleus of informational materials which will be expanded and refined as the R&D program continues. In the following chapters, techniques for use, system components, and target groups are treated in greater detail.

II. THE SYSTEM AND WHAT IT CAN DO

The SRS Research Information System is a method of organizing the large body of information generated by research and demonstration projects sponsored in part by the Social and Rehabilitation Service. Its purpose is to provide easy access to specific social and rehabilitation-related information contained in R&D project reports and publications.

The system has been developed as an open-ended, dynamic instrument for classifying information for ready reference. Because of the open-ended approach, new information can be incorporated as it becomes available to users.

This chapter outlines the primary and secondary components of RIS and suggests potential uses as well as limitations.

COMPONENTS OF THE SYSTEM

RIS consists of a number of materials and other resources for making appropriate knowledge, including research results, available to and usable by rehabilitation agencies and practitioners.

Primary Materials

The following materials were developed as part of the total SRS Research Information System.

SRS Final and Special Reports

Final reports describe the design, methodology, and conclusions of R&D projects in considerable detail, whereas special reports describe one aspect of a larger study. Both have been deposited with the National Technical Information Service (NTIS). They are for sale by NTIS in printed copy and in microfiche—a form of microfilm on cards, requiring the reader to project the printed copy. Individuals who wish to secure copies of the reports, after ascertaining their availability, should write directly to NTIS. (See Appendix D.) Copies can also be obtained on a loan basis from many libraries in State vocational rehabilitation agencies.

RIS Abstracts

An abstract is a summary of the project report. It tells the searcher the names of persons and organizations that have done research in the field, the methods they have used, what they have learned, and how the knowledge gained can be put to use within the field. Each abstract also lists a series of descriptors, or key words, which apply to the final report of that project. Descriptors are words which the abstractor thinks best describe the content areas of the report under consideration. It is through these descriptors that all documents are indexed and searches are conducted. The abstract is divided into the following sections: (1) statement of the problem; (2) methodology used; (3) major results obtained; and (4) usage potential.

RIS Thesaurus

The *SRS Research Information System Thesaurus* provides a lexicon of terms for use in indexing and searching for Social and Rehabilitation Service project documents. This is the master list of descriptors used in RIS. In addition, the Thesaurus shows relationships between descriptors, thus allowing the user to broaden or refine his search.

RIS Index

The *SRS Research Information System Index* is a listing of 2,200 final reports of all SRS-funded projects. It lists the projects alphabetically by major headings, descriptors and subdescriptors, authors, and project number.

RIS Locator Cards

Each card in the set of 5 x 8 RIS Locator Cards has a descriptor term at the top and lists by number the project reports which have content relative to

that term. The cards can be used in combination with each other to identify projects that deal with a series of related topics. (See Chapter III.)

Secondary Materials

The following publications are tools to extend RIS information. They were developed for purposes other than those of RIS, but provide information linked to SRS research and demonstration projects.

SRS Research 1971

SRS Research is a source book identifing projects which are or have been conducted under a grant from SRS. Each listing includes the project number, project title, grantee's name and address, project director, and a brief description of the project. The document is updated periodically.

Rehabilitation Research and Demonstration Projects, 1955-1970

The key word index, *Rehabilitation Research and Demonstration Projects, 1955–1970,* lists the final reports of SRS-sponsored projects as well as other publications generated by SRS projects completed prior to December 1969. Information to supplement the index is currently being assembled. In contrast to the initial publication, which was limited to vocational rehabilitation (VR) program output, it will include not only VR publications but also those from other SRS programs.

Directory of Rehabilitation Consultants, 1971

The *Directory of Rehabilitation Consultants* is a roster of persons who have had recent experience as consultants with VR agencies and express an interest in providing further consultation. It is a useful tool for linking VR staff and other personnel to specialists in particular subject matter fields, and features a key word index to consultants, based on selected topics. Consultants list their qualifications, interests, and range of availability.

Guide to Information Centers for Workers in the Social Services, 1971

The Guide provides extensive descriptions of 44 major information centers significant to social and rehabilitation workers and briefly describes 113 other information service organizations. All are indexed by key words primarily from the field. The book should be especially useful to individuals collecting information for long-term planning in the administrative services or in program and staff development, and to educators interested in developing curriculum materials. It provides the information needed to make a proper request to a particular information center and specifies the extent, form, and cost of the assistance the center can provide.

Directories of Research and Training Centers

The directories list the R&T centers and indicate the areas of research and training they offer.

WHAT PROBLEMS CAN RIS HELP TO SOLVE?

The material in the RIS system is a prime source of information for use in dealing with and solving a wide range of problems within the field of rehabilitation. It is the major source of information on programs that have provided direct rehabilitation services to members of disability groups. Thus, it shortens the pathway to discovering what has been tried in serving each group and how well each technique has worked. The information, once secured, can be helpful in solving clinical problems of staff development and training, and problems in administration and program evaluation.

Clinically, RIS is a source of ideas for practitioners such as counselors, workshop foremen, work evaluators, and placement officers, all of whom need to find a way to serve individual clients more effectively. It is true that much of the research reported from SRS projects investigates *group* differences or *group* service. Nevertheless, the ideas generated by studying groups can contribute to helping individual clients, as long as there is an awareness of the limits that must be observed.

In regard to planning vocational rehabilitation programs, the system provides the single most useful resource for finding out what has been done by others in demonstration projects and how well different techniques have worked in various settings.

Thus, the program planner can base his decision on the experiences of others who have (1) attempted to serve a similar client population, (2) developed innovative techniques for serving specific disability groups, or (3) developed effective staffing patterns and supportive services.

The staff development or training specialist will

find material in the system ideal for use as a basis for staff training programs built around disability groups, client evaluation, and other subject areas within the provision of services. Abstracts in pertinent areas may be duplicated and assembled as a type of "source book" for use in lectures or discussions. As a matter of fact, a unique source book could be assembled to represent one of the basic documents in almost any area of staff training.

Educators and students in rehabilitation have found the system components to be especially useful in the development of research papers or term papers, particularly in the field of rehabilitation counseling. The system provides access to a broad range of materials in the SRS domain which, in most cases, would be unknown or inaccessible to the potential user through other indexing procedures. Actually, RIS has data relevant to almost any rehabilitation topic that a searcher is likely to want.

In summary, the system provides an effective starting point for locating research in a wide area. It leads directly to data on all SRS-sponsored research dealing with a variety of problems and with the methods used to solve them.

LIMITATIONS

While there are many purposes and problems for which the system is important and relevant, there are few for which it alone is sufficient.

The system is limited to SRS-sponsored studies, and most topics may require literature searches from a wider range of resources. A great deal of material which deals with the social, mental health, and strictly medical knowledge needed by rehabilitation personnel is found in publications arising from research supported by organizations other than SRS. There is much useful material in books and journals which is not derived from SRS-supported projects, but is still highly relevant to problems of counseling, diagnosis, vocational program planning, and vocational rehabilitation research. In addition, articles and other reports based on SRS projects but not a part of the final report may be located in journals, monographs, and collections.

Naturally, RIS cannot help the user decide which documents are most likely to be of benefit. When the user obtains a report he has to exercise critical judgment in determining its relevancy. Furthermore, even though the report may be relevant and valid, the whole process of synthesizing available information in order to decide upon the content of a training program or the structure of a program plan requires professional judgment.

Obviously, then, the system is a tool to be used by the professional person in making decisions and developing plans. Although RIS reports document the nature of work which has been done, or findings which have been obtained, they are not a compendium of answers to specific problems but rather a basis for making informed professional judgments. The following chapters will indicate how utilization personnel in different settings around the country can help the user link RIS with other useful resources.

III. SEARCH STRATEGY

UNDERSTANDING THE DIMENSIONS AND PARAMETERS OF THE PROBLEM

A major use of RIS has to do with problem resolution. Whether in the area of administration, program planning, or delivery of services, RIS can provide useful background information for coping with and contributing to the solutions of specific problems.

However, before RIS is utilized, the prospective user should determine exactly what the problem is and have a thorough understanding of it. For example, the administrator of a sheltered workshop, who feels his payment rates for clients should be revised, must first have some idea of his goals in attempting wage-scale revision. Is his major concern the increase in motivation of his clients; or is it, perhaps, the development of a more realistically oriented work atmosphere or psychosocial milieu? On the other hand, it might be to place the workshop on a more financially sound, efficient, and business-oriented basis. The user must recognize at the outset the primary problem to be resolved. Such clarification will determine the questions to which he is seeking answers.

An understanding of the problem is not always easy to attain. It requires a diagnostic approach based upon an exploratory sequence of preliminary data or information gathering. For example, the user should read about the subject and consult with knowledgeable persons to gain an overview of the problem area. The University of Florida's publication "Rehabilitation Research and Demonstration Projects, 1955–1970" ought to be helpful in guiding him to appropriate reading material.

It is important to note here that what appears to be the presenting problem may not be the real one. For instance, the administrator of a rehabilitation center who is experiencing difficulty in patient scheduling may find, after analyzing the situation, that his problem lies not in faulty scheduling techniques but rather in staff morale, role overlap, or even resource allocation. This problem analysis prior to using RIS is of paramount importance. Similar circumstances can be found in the role of the researcher, who may be grappling with the influence of a particular counseling technique in fostering client dependency when he should be investigating adjustments to aging as a dependency-producing variable in a given situation.

Once the nature of the problem has been clearly recognized and established, the problem itself must be defined; that is, there must be a determination of all relevant aspects and some degree of specificity concerning limits. Failure to develop specificity can result in confused meandering around the system. To illustrate, a search for information on the vocational placement of the mentally ill could be endless and unproductive. On the other hand, a search for information concerning the vocational placement of chronic schizophrenics out of State hospitals is more goal-directed and therefore more controlled. If the searcher can further delimit or delineate the problem so that long-term hospitalized paranoid schizophrenics are involved, the use of RIS becomes even more manageable.

Finally, after the problem to which RIS is to be applied is well defined, it must still be elucidated. By this term we mean that it must be broken down into subsets of questions or information needs to which information contained in RIS can be applied. For example, if we are searching for effective placement techniques, we might wish to acquire information comparing directive and less-directive approaches.

In summary, use of RIS should not be a random, undisciplined, uncoordinated process, but rather a carefully planned procedure in which adequate preparation leads to the most useful information which can be brought to bear upon the problem.

WAYS TO ENTER THE SYSTEM

As indicated in the previous chapter, RIS is based upon the use of index terms, or descriptors. Assigning relevant terms and using pertinent components of the Index System influences the success of a search strategy.

Use of Descriptors

The following question was received in a State rehabilitation agency recently. It is printed here

exactly as originally stated by a rehabilitation professional in the field.

> One of the counselors here has shown considerable interest in knowing the percent of clients that go to work in the field in which they were trained. In other words, how many clients (%) are trained and go to work in the field in which most of their training took place? I realize that vocational objectives are changed frequently in the plans, but often it is possible to identify the principal type of training that took place. Incidentally, data concerning this question would be particularly interesting as regarding first-year counselors.

This is a well-stated problem. Not only has the questioner indicated the general areas in which he is interested (job training and job placement), but, more importantly, he has posed a specific question (sentence 2) which interests him.

Let us analyze the way in which appropriate descriptors for a search in RIS may be chosen. There are two types of descriptors to consider: subject and form descriptors. In assigning subject descriptors, the first step is to pick key words or terms from the question as it is posed. For instance, in the current example, the first subject descriptors which come to mind that might be indexed are *job training* and *job placement*. Further consideration of the problem produces the following possible descriptors: *placements and closures*, *vocational plans*, and *vocational training* or *training*. If none of these descriptors prove useful in locating relevant material, we might want to consider also the last sentence in the request and attempt to access material through a descriptor concerning counselors. In the above illustration, *counselor effectiveness* may be the most useful.

Form descriptors may be applied to a problem when the searcher is interested in material in a particular format—bibliographies, audiovisuals (or a specific type of audiovisual such as videotape or film), or directories. In the present case it seems quite probable that the kind of information we are seeking will be found in *follow-up studies*.

At this point we have a list of the following possible descriptors: *job training, job placement, placements and closures, vocational plans, vocational training, training, follow-up studies,* and *counselor effectiveness*. With this list in mind, we turn to the RIS Index. The first descriptor searched should be the one which seems the most relevant and the most specific for the problem at hand. In the present case, *job placement, vocational plans,* and *follow-up studies* all seem to be likely candidates for early access. On the other hand, terms like *vocational training* and *training* will be searched only if other terms do not produce results; for both are so broad that the searcher knows he will have to search through many entries extraneous to his specific problem if he uses them as search vehicles. Likewise, the term *counselor effectiveness* will be used only as a last resort, for it is somewhat peripheral to the problem as stated and will undoubtedly direct the searcher to at least some irrelevant material.

Job placement is listed in the Index. Hence, using this descriptor, the searcher can read through the list of entries, noting the "See Also" references and index terms which have been assigned to the reports cited. These additional terms are useful in further defining the subject content of each report so that a clearer idea of its relevance can be obtained. For those reports which appear to be relevant, report numbers should be noted so that their abstracts can be looked up later.

Under *job placement*, the descriptor *staff training* is also used. This term appears to be more specific than the already listed *vocational training*, so it might be well to look at the entries under *staff training*. The discovery of this new term illustrates a point which should be emphasized in using the RIS Index. That is, in compiling a list of possible descriptor terms, always try to think of *all* the terms which can be brought to mind.

After reading through the *job placement* and *staff training* entries, proceed through the original list of descriptors. If the searcher tries to use the term *vocational plans*, he will discover that this term is not used as a descriptor in the RIS system; nor are the terms *vocational planning* or *rehabilitation plans* used. Hence, the term *vocational plans* is of little value in this search. Proceeding down the list of possible descriptors, other changes will have to be made as a means of adjusting to the descriptors actually used in the Index. For example, *placements and closures* may be considered as one term, but in the Index only *placement* is listed. Similarly, the searcher probably will wish to examine not only the items listed under *follow-up* but also the more numerous listing under *evaluation*.

Once the list of descriptors has been exhausted, and the number of each report which may prove useful has been recorded, the abstracts for the desired reports can be obtained.

A searcher who is not familiar with the RIS system, or who is searching somewhat unfamiliar subject matter, would be well advised to consult the RIS Thesaurus, if possible, for initial guidance. The Thesaurus provides a more direct means than the Index for learning what terminology is likely to be found in the Index, and for learning the interrelationships among terms, which the hierarchical arrangement helps to make explicit.

Use of the Index System

The Index System includes:

(a) RIS Thesaurus
(b) RIS Index
(c) Indexes: *Rehabilitation Research and Demonstration Projects, 1955-1970* and *SRS Research 1971*
(d) RIS Locator Cards

RIS Thesaurus

How to use: In the alphabetic section, look up the index term that comes to mind. If it appears in the Thesaurus and does not refer the reader to another term, it will be accompanied by any or all of four kinds of note. The first, *Refer from,* names terms which have *not* been accepted as indexing terms but which refer Thesaurus users to the term being consulted. The note, *Narrower Term,* is used to name all terms hierarchically connected to the consulted term, one level below it. *Broader Term* names the term hierarchically one level higher than the consulted term. If no broader term is specified, the consulted term forms the beginning of a hierarchic chain, and therefore no broader term exists for it. The fourth note, *Related Term,* names other terms which might usefully be given attention as additional or substitute index and search terms. The following is an example:

LEG
Refer from: Ankle, Lower Extremity
Narrower Term: Foot
Broader Term: Limbs
Related Term: Artificial Limbs

The Thesaurus contains three sections. In addition to the alphabetic arrangement, there is a hierarchic listing, giving terms which may be used for indexing or searching, in a "logical" arrangement, that is, from the most important term to the least important term. The third section provides a word index to multiword terms, which makes explicit all contexts in which terms occur; for example, all uses of the word "rehabilitation" to form terms such as "rehabilitation agencies," "vocational rehabilitation," "cosmetic rehabilitation."

Advantages: Allows the user to learn exactly what terms have been used for indexing and aids in formulation of search strategy by suggesting additional or alternative terms to consult.

Disadvantages: Because the Thesaurus is meant to be used independently of any one index, it gives no information on the number of reports indexed by each term; however this information is available through the Locator Cards.

RIS Index

How to use: Consult the subject headings in the Index to locate suitable reports. A sample citation and an explanation of its components follows:

SAMPLE CITATION
(1) OPERATIONS RESEARCH
(2) *See Also:* PREVOCATIONAL SERVICES, VOCATIONAL TRAINING
(3) Don W. Russell
(4) RD-2303
(5) PRELIMINARY OPERATIONS ANALYSIS OF VOCATIONAL REHABILITATION FUNCTIONS IN VIRGINIA, MARYLAND, AND DISTRICT OF COLUMBIA
(6) **administration, *operations research, *program studies, *vocational rehabilitation, data processing, effectiveness, evaluation, models*

EXPLANATION
(1) Subject heading
(2) Additional subject headings which may be consulted to locate related material
(3) Author
(4) Report number
(5) Report title
(6) Indexing terms. An asterisk(*) designates the major terms, those which best describe the report's content, and which are used to form subject headings in the Index. The terms without an asterisk are minor terms which help narrow the search

SUBDIVISION OF SUBJECT HEADINGS

Since only major, or access, terms were made subject headings in the Index, the headings which would have had large numbers of citations (more than 10) were subdivided to facilitate searching.

Subdivision was accomplished by making each major term assigned to a report a subheading. Thus, if a report were assigned the major index terms *SEVERELY DISABLED, *VOCATIONAL REHABILITATION, and *WORK ADJUSTMENT and VOCATIONAL REHABILITATION were a subject heading with more than ten citations, the report would appear under such divided subject headings as VOCATIONAL REHABILITATION —SEVERELY DISABLED and VOCATIONAL REHABILITATION — WORK ADJUSTMENT. Counting all such potentially possible subdivisions, a report with four major terms which also refer to more than 10 reports can be listed as often as 12 times in the index: A–B, A–C, A–D, B–A, B–C, and so forth. It would appear also under A, B, C, and D singly, but for cross-reference only, not for citation.

Advantages: "See" and "See Also" references given in the Index help the reader to consult the subject heading best tailored to his need. Use of the report number allows for keying into annotation, author, or agency data contained in *SRS Research 1971* and *Rehabilitation Research and Demonstration Projects, 1955–1970*. The complete list of indexing terms sometimes helps to clarify a title that is not very informative.

Disadvantages: Because minor index terms are not made subject headings, access to reports by means of these terms is lost.

Additional Indexes

(1) *Rehabilitation Research and Demonstration Projects, 1955–1970*

How to use: Look up descriptor term. Choose from titles of projects the most pertinent project publication numbers.

Advantage: Provides descriptive titles. Also is valuable for its indexes on authors, grantees, grantee addresses, and project addresses and its listings of projects by number. This is the *only* source that contains listings of R&D project-generated articles published in journal and book literature.

Disadvantages: It may be necessary to scan the entire list of titles before finding a pertinent one. In some cases, the titles do not tell enough about the projects.

(2) *SRS Research 1971*

How to use: Look up descriptor term in subject index. Scan indicated page for appropriate reference.

Advantage: Each listing is annotated. Listings are arranged in 22 broad categories. If a search into a broad category is required, this index provides a quick way to review all related reports. Furthermore, it is the *only* source which lists projects for which there is yet no final report, thus giving the searcher an opportunity to contact the personnel of pertinent projects for preliminary data or other information.

Disadvantages: Because of its organization, this index may be somewhat difficult to use. Also, the annotations show only the intent of the study, not the outcome.

(3) *Guide to Information Centers for Workers in the Social Services, 1971*

How to use: Locate information sources by subject.

Advantages: Contains extensive descriptions of the 44 major centers and briefly describes the potential value of 113 other organizations. It provides the information needed to make a proper request to the information centers and specifies the extent, form, and cost of any assistance they can provide. All centers are indexed by key words drawn primarily from the broad spectrum of social and rehabilitation services.

Disadvantages: Items related to the same subject are often listed in different sections under synonym terms rather than located under a general heading.

RIS Locator Cards

How to use: Pull cards with desired descriptor terms. Each card contains columns 0–9 in which have been placed the project numbers according to the far right-hand digit of each. By comparing the columns of two cards the user can find matching numbers which indicate that a particular project contains information reflecting both descriptors. A third card can be compared for further specificity.

Advantages: Speed in usage. Helps find projects that contain specific combinations of descriptors.

Disadvantages: Although good in theory, this method may not yield an adequate number of abstracts. In other words, pertinent materials could be overlooked.

SECURING ADDITIONAL INFORMATION FROM RIS

Skimming abstracts to determine their relevancy to the problem is the primary procedural step in determining the need for additional information. Some abstracts will contain sufficient information in themselves while others will require the full report for

adequate details. Often an individual needing to incorporate information from RIS will wish to obtain the full report to determine the quality and scope of the original R&D project.

Whenever a finite number of documents has been published, an information seeker is confronted with the problem of document retrieval. In this instance, the user seeking copies of R&D final reports of projects has a number of sources to which he can direct requests for such documents. Since efficiency is a primary factor in determining the accessibility of a document, the user ought to focus his efforts upon those sources of information that can save him time and money.

Nearly every State vocational rehabilitation (VR) agency has a library or depository for rehabilitation research and other professional literature. Many States have a librarian or some person assigned to the maintenance of a system to retrieve items from the storage facility. Therefore, a user might first try to retrieve the final report he needs from the State VR agency library. Or he could ask the grantee to either give or lend him a copy. Since grantees are encouraged to have 600 copies of their final reports printed, complimentary or loan copies may be available, especially where projects have terminated only recently. If the project terminated several years ago, the user must often search for a copy of the final report. The State agency library, although an excellent resource, does not always have enough storage space or personnel to provide adequate service to the user desiring relatively rapid turn-around time. In such cases, several other potential sources of final reports may be approached. Among these are universities, libraries, and the following SRS-supported research facilities affiliated with universities: Regional Rehabilitation Research Institutes (RRRI); Regional Research Institutes in Social Welfare (RRISW); and Research and Training Centers (R&T Centers), with core areas in medical and vocational rehabilitation, mental retardation, and deafness. These facilities frequently have libraries which may or may not make available loan copies of R&D project reports. In some instances, the user may be required to use the document at the research facility itself.

Another possibility is the National Technical Information Service (NTIS), used by the Division of Research Utilization as a depository. SRS has a contract with NTIS to produce microfiche copies of all SRS-supported R&D projects for a nominal fee *upon request*. NTIS can also fill requests for printed copies of final reports, but at a higher cost than the microfiche copies. Eventually it will have all final reports. At present, however, it has only those for which abstracts have been completed.

Research and Demonstration Briefs are an additional source of information concerning SRS-supported research. Each Brief is a two-page summary of a selected research report. It enables the user to inject an intermediate step in his informational search, and sometimes eliminates altogether the need to examine a final report. Copies of individual Briefs are available from the Division of Research Utilization, SRS. Unfortunately, the Division currently has time to summarize only about 4 percent of the final reports it receives.

Many research papers, articles in professional journals, monographs, or separates also contain valuable source material and can be located by using other standard reference guides. Procedurally, the user should identify project staff from such sources as abstract headings, R&D Brief footnotes, and RIS indexes. Inquiries for additional publications should then be directed to the authors, principal investigators, project directors, or grantee organizations.

SECURING INFORMATION FROM OTHER RESOURCES

The diverse and complex knowledge of the social and rehabilitation services is the product of several generations of practitioners, social scientists, medical specialists, and other professionals from a variety of disciplines. The SRS–RIS has given great impetus to work relevant to SRS' mission. Also, other Government programs such as those of the Department of Labor and the Office of Education, the research centers of major universities and research institutes, and academic investigators contribute to the solutions of problems of concern to SRS. An awareness of additional potential resources will permit the RIS user to extend his scope of alternatives.

The range of resources which go beyond RIS is further expanded in two documents mentioned above: *Directory of Rehabilitation Consultants, 1971* and *Guide to Information Centers for Workers in the Social Services, 1971*, available from the RRRI, University of Florida. (See Appendix A–2.) Frequently used resources listed in the Guide, for instance, are:

ERIC Information Retrieval Center on the Disadvantaged

Eligibility: No special qualifications. Inquire by letter. (See Appendix D.) A fuller explanation of the ERIC (Educational Resources Information Center) system can be found in the University of Florida publication cited above.

Mission: To collect, maintain, and make available to qualified users up-to-date information about urban children and youth disadvantaged or handicapped by their economic, ethnic, or social status. To analyze and interpret current research and program literature.

Services: Suggests literature where answer may be obtained; cites relevant references. Provides literature searches regarding state of the art reports, and prepares bibliographies. Abstracts of reports are available in *Research in Education* from the U.S. Government Printing Office. Reprints and microfiche of documents are available through the ERIC Document Reproduction Service. Consulting services are provided in research planning and program planning and administration. Referral is made to other possible sources of information.

ERIC Counseling and Personnel Services Clearinghouse

Eligibility: No special qualifications. Inquire by letter to the Learning Resources Coordinator. (See Appendix D.)

Mission: Counseling and related services.

Services: Provides answers to specific questions; suggests literature where answer may be obtained; cites relevant references. State of the art reports and bibliographies are prepared (both recurring and demand). Reprints are available; workshops in research planning are conducted. Referrals are made to other likely sources of information.

National Technical Information Service (NTIS)

Eligibility: No special qualifications. Inquire by letter (see Appendix D), or telephone to Information Services, 703–321–8523.

Mission: The establishment of the National Technical Information Service (NTIS) in the Department of Commerce in September 1970 was a major step towards consolidation and improvement of services to simplify and increase public access to Federal publications and data files of interest to the business, scientific, and technical communities. The Clearinghouse for Federal Scientific and Technical Information in the National Bureau of Standards has been transferred to the NTIS and its functions merged with the broader mission for NTIS. The new organization adds a variety of business and economic information services which were provided to the public from widely separated components of the Department.

Services: Provides answers to specific questions within limits of available material; suggests literature where answer may be obtained; cites relevant references. Provides literature searches regarding specific and general questions and state of the art reports (from services within the system, but none prepared by NTIS). Offers NTISearch, an abstract retrieval service, which provides up to 100 abstracts of technical reports produced from Government-funded R&D projects released since 1964. Each search costs $25, and users must provide search questions and give key words or descriptors. Photocopies of NTIS reports are available, of which approximately 95% are also available in microfiche form. However, NTIS offers a Selective Dissemination of Microfiche service which provides the customer with microfiche copies of the reports in highly selective fields of interest.

This service provides automatic mailing of documents as they become available. It is advisable to set up an account with NTIS to assure maximum utilization of the services offered and minimum turn around time on information requested. Statistical reports prepared by other Government agencies are available on file with NTIS. Foreign translations of research and development reports are offered through NTIS by the Joint Publications Research Service. Referral is made to other possible sources of information.

MEDLARS, National Library of Medicine

Eligibility: Health professionals and other research persons. Inquire by letter or telephone to Head, MEDLARS Management Section. (See Appendix D.)

Mission: To provide references to the biomedical literature contained in the National Library of Medicine to researchers, clinicians, and other health professionals through MEDLARS (Medical Literature Analysis and Retrieval System).

Services: Provides answers to specific questions; suggests literature where answers may be obtained; cites relevant references. Provides literature searches regarding specific and general questions (as staff time permits), state of the art reports. Bibliographies, both recurring and demand, are prepared. (Special forms are available for making requests. See User Information.) Photocopies are available and inter-library loans are arranged. Referral is made to other possible sources of information.

IV. RIS— WHERE, WHO, AND HOW

RIS—WHERE?

RIS has potential benefit for personnel in regional, State, and district offices. Regional staff members, including the R&D specialist, will find it useful for references related to their program and staff development responsibilities. RIS could also be utilized by regional personnel from related programs such as manpower, drug addiction, and correctional rehabilitation, especially in the planning and development of joint programs.

At the State level, the primary users of RIS are administrators and specialists responsible for program planning and development, and staff training. RIS could assist program development specialists in identifying programs, ideas, or methods which respond to similar agency problems; and RIS-provided approaches and techniques could serve as the basis for staff development.

Secondary users of RIS at the State level are the staff of related agencies having responsibility in such areas as mental health, mental retardation, special education, drug addiction, and correctional rehabilitation, particularly in the planning of cooperative programs and joint training.

Users of RIS at the district level include counselors, caseworkers, paraprofessionals, work evaluators, placement specialists, supervisors, and other practitioners from both the public and the private sector. At this level RIS could assist practitioners in their professional development, in maintaining an awareness of new approaches and user results, and in program and staff development.

RIS—WHO?

Regional Offices

The Department of Health, Education, and Welfare is divided for administrative purposes into 10 regions, each of which relates directly to the various agencies and bureaus within HEW.

The linkage person at the regional level for the SRS Division of Research Utilization probably will be the R&D specialist. Administratively, he is directly responsible to the regional commissioner in the regional office. He also provides a linkage to the State agencies; the research facilities within the region, such as the RULs, RRRIs, RRISWs, R&T Centers, and University Affiliated Facilities; and to anyone else residing in the region who has an informational need amenable to solution by the resources available to him.

Within the regional office the R&D specialist has at his disposal not only informational resources but also assistants to whom he can refer requests for information. Ideally, one of these assistants should be a person trained in library sciences or as an information specialist. The position of information specialist is necessary because RIS is only one component of a complete network of resources contained in, or available to, the regional office. In addition to RIS, the information specialist will have responsibility for filling requests for information, including the provision of linkages to other components of RIS both at the regional and national level. He will thus be skilled in accessing other related information systems, directing users to special information centers or resources, and filling requests for information in the most expeditious manner possible. In those instances where employment of a full-time librarian is not feasible, the R&D specialist will assume the professional functions of the information specialist, and the clerical functions will be delegated to a person in a secretarial or clerical position within the regional office.

Regional Facilities

The R&T Centers, RRRIs, RRISWs, RULs, University Affiliated Facilities, and other facilities serving the population of rehabilitation and social service

professionals primarily within regional boundaries form a network of important resources. They have specialized functions such as the provision of in-depth information concerning a specific area. To illustrate, there are R&T Centers on mental retardation, rehabilitation medicine, and rehabilitation counselor training; RRRIs have core areas of research such as the delivery of services in rural regions, the professional roles and functions of rehabilitation counselors, and rehabilitation administration and program evaluation; RRISWs are similar to RRRIs in that each RRISW has a specific area of specialization, for example, policy decisions for social planning; and the RULs have tested promising procedures and techniques to determine what refinements are needed for generalized use. Thus, the user can expect to be referred to whichever one of these facilities is studying an area of content which concerns his particular interest. (See Appendix A.)

With regard to personnel, the regional facilities may or may not have an individual assigned to the specific responsibility of handling informational needs. Inquiries addressed to the "librarian" or "information specialist," however, will be channeled to the proper office. The person in charge of filling informational requests will usually have semilibrarian clerical skills, with intimate knowledge of the contributions to the professional literature by the staff of the facility. Typically he can fill an informational request with specific documents or referrals to appropriate resources. Whoever is assigned responsibility for handling requests for information will provide a linkage to and with national, regional, and State research utilization personnel and potential users. (See chart.)

The State Office

RIS field tests demonstrated the efficacy of having a Research Utilization Specialist (RUS) in the State agency administrative office with the responsibility of providing stimulation and resources to program planners, supervisors, and administrators. The RUS encourages use of the results of previous rehabilitation research and related information dealing with agency problems. Thus, he is the principal person at the State level responsible for constructing, maintaining, and putting into operation the informational system deemed necessary in each State. Just as in the SRS Division of Research Utilization, the research utilization specialist in the State office has responsibility to, and acts as, a resource person for all units of the State administrative organization. In some instances, there may be only one RUS in an entire region. Thus far, the RUS program has been conducted only on a pilot basis, so it is impossible to say just how extensive the practice will become. At any rate, the RUS at the State level will really need the assistance of a librarian or, at the very least, a clerical person who has received some training in library procedures, information systems, and the use of special equipment so that the State-information-resource terminal can adequately handle requests for technical information from potential users.

The District Office

The States have also been subdivided for administrative purposes into a number of districts. District offices are usually located in principal population centers and are the smallest unit in the total SRS information system. They do not receive requests frequently enough to warrant having a full-time employee in charge of the maintenance and operation of the system. Nevertheless, it is essential to have someone, usually a first-line supervisor or a person of similar responsibility, to serve as an advocate and resource for those individuals in the local office who have informational needs. It is an incumbent responsibility of this information delegate to have knowledge of the components, features, and usage potential of the SRS-RIS related informational systems. He must know how to gain access to the needed components at higher levels in the system, that is, the State and regional offices, so that he can act as an important and necessary resource to others in the district office.

To summarize, the SRS Research Information System has become operational at the regional, State, and district levels. The extent to which the system is complete at any one of these levels is proportionate to the assumed demand for information at that level. Thus, the number and professional quality of personnel must increase as the number and diversity of requests for information increases.

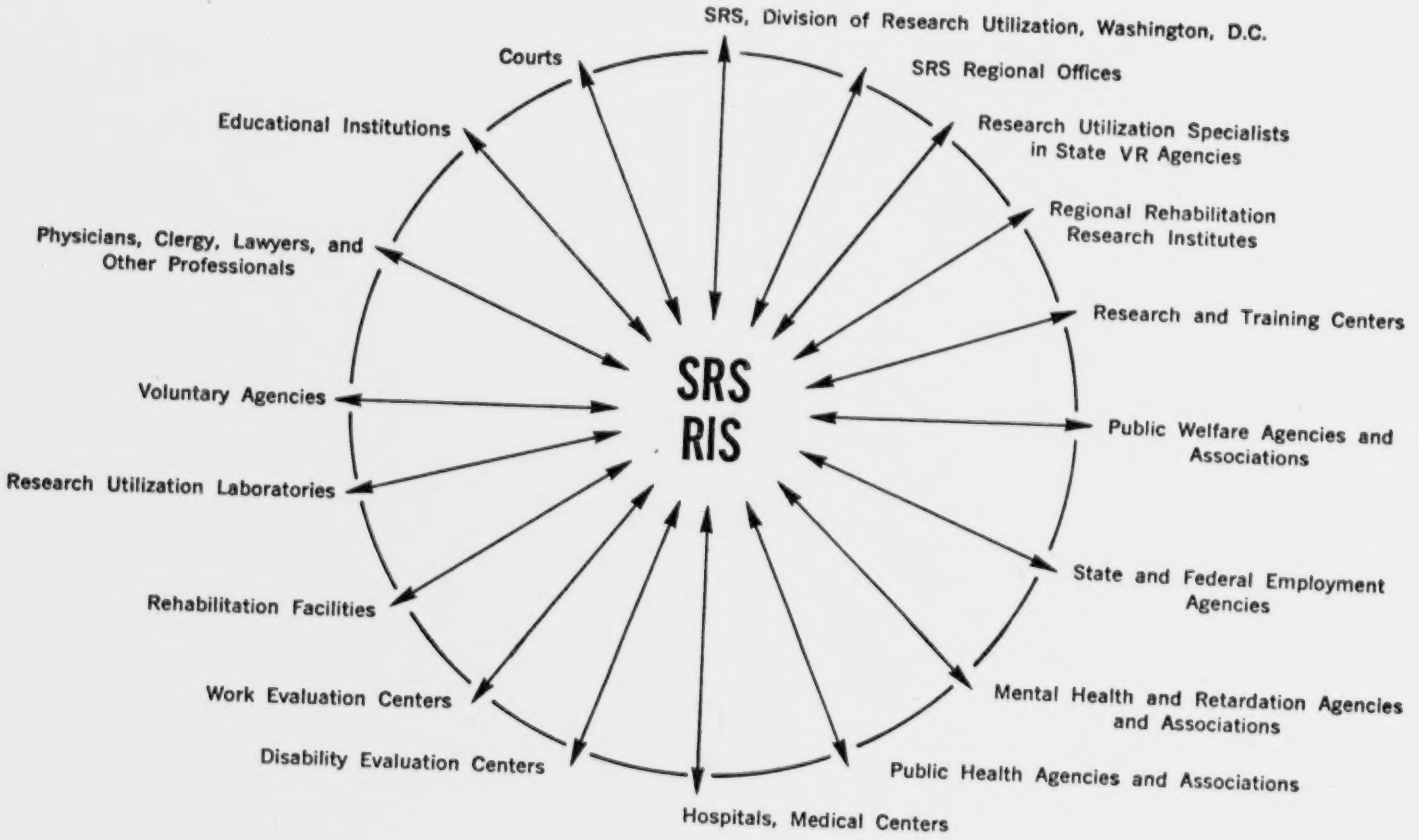
In those rare instances where no help can be obtained from any of the above sources, inquiries may be addressed to the Division of Research Utilization, SRS. (See Appendix D for full address.)

RIS—HOW?

Equipment

Equipment for RIS in the regional, State, and district offices varies according to the demands of

REHABILITATION COMMUNITY



the users, the size of the geographic area, and the participating agencies.

A trend toward decentralization is bringing into focus SRS regional leadership and guidance. Upon the advent of the computer age, this decentralization effort will have an even greater emphasis. Some changes soon to come will require equipment for machine-readable documents; a microfiche reader-printer; copying equipment; and adequate storage space for documents, reports, and microfiche, along with the necessary security. Assuming a majority of the user population serviced by the regional offices acquires reader-printer equipment, it would be economical for the regional office to include a microfiche reproduction unit. This unit would permit direct reproduction of the microfiche itself. Storage space necessary for complete documents would no longer be necessary and the cost of reproduction and mailing would be considerably less.

State office equipment necessary for the utilization of RIS will reflect the resources of the SRS regional office as well as the district offices it serves. Certainly a reader-printer is a necessity in the State office, as is equipment for reproducing hard copy for dissemination. Space for storage of documents, reports, and microfiche is necessary at the State level. The efficiency of the system will depend upon an adequate retrieval system and personnel responsible for the system. Document control at the State level is necessary.

District office equipment can be reduced to a basic microfiche reader, a copy machine, and adequate storage space and security. It is assumed that needed information will be directed from the district offices to the State and regional system and ancillary linking agencies.

Aiding the User

It is necessary for staff training specialists, along with administrators and supervisors, to plan for promoting optimal use of RIS and related information resources. Research utilization specialists have found that personalized training and newsletters are effective means of acquainting State agency staff with the potential utility of RIS. Announcements and even meetings about RIS with specific project leaders should be followed by personal assistance to assure the most satisfactory usage. Probably the best way to encourage and secure appropriate requests is by consultation. The approach underlines the importance of having a professional person for each unit at the three organizational levels responsible for RIS, if the system is to have optimal use.

RUS field tests suggest a number of ways to familiarize potential users with the system. Newsletters may not be feasible for regional or district office groups, but some informational variation should be used. For example, the person responsible for RIS might copy significant findings or project descriptive summaries for current reports and route this to appropriate individuals, noting the availability of the full report. Also, displays, linker games, conferences, and NRA or staff presentations have been found helpful.

Some research and RRRI experience indicates that accessibility is the critical factor in determining use of information in those settings which lack major elements of RIS or other resources. Telephoning to elicit information from other SRS research utilization units or program staff is desirable. Regional office personnel who have access to the Federal Telecommunications System should have no difficulty in establishing linkages by telephone. Although costs present some constraint on quick consultation or linkage, the ease and immediacy of the telephone adds greatly to a feeling of accessibility.

Another approach to encourage State and regional personnel to make use of RIS materials is to determine current concerns and interests of staff and to present copies of RIS abstracts, R&D BRIEFS, or similar material to the staff person for his review. Short questionnaires or checklists are helpful in obtaining "user profiles." These would then guide RIS personnel in selecting pertinent material.

The RIS agent in the unit should also develop request forms and have tools such as the *Guide to Information Centers* available to help the user obtain reports, microfiche, or more extended bibliographies. The agent can also help the user by referring him to other individuals whom he can talk with or write to in order to obtain the benefit of their specialized knowledge in a given field. In some situations this technique could prove to be highly beneficial.

Furthermore, although RIS can provide linkages to other systems such as ERIC or MEDLARS, not all users are familiar with these systems. Hence, by acquainting the user with their existence and some general information concerning their use, RIS personnel can broaden the informational horizons of the user.

In essence, the district, State, and regional offices and the RRRIs are purveying similar informational products. However, because of differing staff,

financial, and hardware commitments, the level of product delivery may vary. For this reason, users of RIS may have to try more than one office to obtain the particular information they seek.

Finally, although the talents of the staff members manning RIS will vary from setting to setting and individual to individual, the members will gradually acquire the experience and knowledge necessary to enable them to guide the user in his search for information.

The Role of the Searcher as Linker

In some cases the ultimate user of the information provided by RIS will not personally conduct the necessary search. For example, legislators, top level administrators, and program planners may frame questions and ask other personnel to search and review pertinent material. In these circumstances the searcher acts as a link between the inquirer and the documents. This may be a difficult role for some people to fill successfully. In order to respond to an inquiry so that the information provided does indeed answer the questions posed, the linker must possess certain personal skills as well as the technical skills required for a successful search.

The remainder of this chapter is a guide for the linkage role. It attempts to alert the linker to the problems unique to this role and furnishes an outline of suggested approaches and their philosophy.

RIS is one of several information sources to which the ultimate user may turn. From the linker's point of view the key questions are these: Which sources must be utilized and for what purposes? Does he have sole or joint responsibility for satisfying the user's need?

The situation requires a process of formulation and refinement of the initial question. Often a second communication with the inquirer is necessary to determine if the user's informational need is really satisfied. At the outset, however, it is most important for the linker to ascertain the circumstances under which the user is turning to him for help. Assuming he is coming of his own choice, is he coming as a last resort, after all other information channels have been tapped without success? Has he reached a critical stage which requires quick answers? Where does the user fit into the agency's table of organization, and what is his viewpoint of his informational need in relation to his own role within the organization? Answers to these and similar questions strongly affect the expectations and receptivity of the user and should cause the linker to adapt his approach accordingly.

Users of information may be classified according to the stage at which they seek information. For example, at one end of the time spectrum are those who seek help soon after first consciousness of an information need; at the other end are those who may have procrastinated in actually posing a question to any known information source. The latter group is approaching the linker as a last resort. They usually ask piecemeal questions which may be faint echoes of their real information needs. Between these extremes of users are a myriad of variations, perhaps the most difficult being the precisionist. He characteristically has given much thought to his informational need and has confidence in his ability to pinpoint the proper question. The major problem here is that he is so overspecific that the linker has trouble learning enough about the context of his real information need to provide a pertinent response.

In the broader context, it is the inquiry or question that influences the response or answer and its utilization; this, in turn, controls new questions, future system organization, future answers, and ultimately, further utilization. In the interaction between the linker and the user, feedback regarding the initial stimulus for the question enables the linker to reformulate the statement of the question so that linker and user can mutually seek and find an acceptable or relevant question to present to RIS.

Barriers to the Process

Physical—Whenever possible the linker should meet with the user in the latter's territory, at his office or work area. This comes closest to ensuring that (1) the user has full confidence that the linker's attention and interest are focused on meeting his needs; (2) the user feels comfortable and secure in familiar surroundings; and (3) the user may assume that confidential statements will not be compromised.

Personality—The linker is engaged in a "drawing out" process which requires empathy, sensitivity, and related qualities that enable him to "size up" people and situations. Nevertheless, he must keep his "cool" with the user who provides only limited, if any, feedback. The resourceful linker will continuously seek ways to relate to users by displaying warmth, interest, and approachability—qualities that are intuitively sensed by the user.

Communication—The alert linker will observe any verbal or nonverbal cues which help decode professional jargon. An even more difficult problem is

...at which users have in phrasing adequate questions ...o secure information. Many users do not know the ...roper questions to ask until they are well on their ...ay to finding the answers. The linker should try to ...ind substitutes for the user's questions that will help ...e user obtain maximum benefit from RIS.

Psychological—Many users feel that asking a ...estion means admitting ignorance—often too ...gh a price to pay in terms of lost prestige ...ong coworkers. This barrier may be overcome ...y frankly stating, "I'm sorry, but this subject means ...thing to me. Will you please tell me more." Such ...nesty may put the user at ease and result in his ...dmitting that he doesn't know much about it either.

Being in possession of information can have unpleasant consequences—possibly requiring reading, understanding, thinking, and, often, deciding and acting. If the user's coworkers also discourage the use of research, it is understandable that this barrier can become the user's as well as the linker's worst enemy.

The Process of Using RIS

Five questions must be resolved before the linker can begin using RIS. They are (1) subject definition; (2) determination of the objectives and motivation of the user; (3) personal characteristics of the user; (4) relationship of inquiry description of the information system, and (5) the nature of anticipated or acceptable answers.

The most critical step is the second—determining why the user needs the information. This can often cut the search time drastically and usually determines the priority, depth, and form of response. At this point there are a number of matters which the linker must consider: (1) What is the general format and sequence in which materials or answers are wanted? (2) Should the linker warn the user of any expected difficulties he foresees? (3) Has the user been told when he may expect interim or final answers? (4) What is the most strategic time to request a definite appointment to explain the research results? With satisfactory answers to these questions, the linker is ready to begin the search.

After the search is completed, there remains the task of tailoring the information and conveying it to the user. This requires the selection of precisely the quantity and quality of information that will help the user fill his information need. These quality control functions can most effectively be performed by responding to the following questions: (1) What is the user prepared to read? (2) In what sequence does the user want materials or answers? (3) How much time is the user willing to spend on the information provided? (4) What value will the user place upon the information provided? (5) How much of what the user receives is he prepared to use?

Users usually want information in a form they can easily relate to the information needed for their own personal data base. It is sometimes advantageous to provide them with interim materials to give early feedback to the linker and concrete evidence to the user that his request is being processed. This allows time for the linker to assess the relevance, specificity, and completeness of his findings. In special instances the linker may provide a precisely tailored product, usually in the form of a summary-analysis.

A second or follow-up contact with the user has several important advantages which may be worth the extra time and effort: (1) It allows cross-checking of the linker's and user's judgments as to whether the original information need has been filled. (2) The linker can transmit personally any special insights developing during the search. (3) The linker keeps "on track" by determining firsthand if the original question has been removed, modified, or suspended by a new information need. (4) The linker finds out whether the original search needs to be expanded, narrowed, or otherwise modified.

Searches of special importance should always be reviewed with the user. In this way the user discovers how to query the information system more effectively. He may also learn about additional unused information services and sources. The review can add to the credibility of RIS effectiveness in the user's judgment. The linker gains vital feedback on the general level of satisfaction of the user. This might result in changed patterns for this or other users. Such feedback can be transmitted by the research utilization specialists to the designers and developers of the system so that they can be responsive to the real user needs and approaches in building the information base.

There are many gradations of complexity in filling requests for information. The process may be completed in 15 minutes or less. It may not require extended follow-up, continuous or intermittent working on the search, or an interpretive summary. In most situations, however, the above process analysis could serve for a variety of questions, users, and situations.

The linker must visualize himself as the liaison between RIS and other sources of information and

the user, or components of his organization and outside elements of the social and rehabilitation community. Because of the linker's strategic location in the information network, he can do this effectively. He should seek every opportunity to involve himself as an active element in the formal and informal information network of this complex of organizations. Through the use of consultants, the linker may best answer an inquiry by putting the inquirer in contact with the expert most qualified to answer his request.

V. SPECIAL HELP FOR SPECIAL PROBLEMS

In some cases, RIS and its linkages to other information systems will not be sufficient to fill the informational needs of the users. This could be because (1) the questions or problems that the user is concerned with are poorly framed, (2) the research reports obtained are too technical for the average user to understand, (3) application of the research findings to the practical problems of the user is not clear, or (4) the user is not in a position to evaluate the validity of the research pertinent to his problem.

Several federally sponsored resources are available to the user to help him elucidate and utilize the research information he has found. Each resource or facility mentioned here may be thought of as a consultation service offering expertise in given content areas.

RESEARCH UTILIZATION SPECIALISTS IN STATE AGENCIES

The Research Utilization Specialist (RUS) is one of the resource persons available to practitioners (rehabilitation counselors, supervisors, administrators) in making use of RIS and other sources of information to resolve problems. Operating on a statewide level out of the State VR agency, he serves as a liaison between research and practice by

1. assisting practitioners in identifying rehabilitation problems and relating research findings to their solution
2. providing an avenue for the urgent needs of practitioners to be brought to the attention of administrators and researchers
3. establishing and maintaining a system for bringing new findings to the attention of practitioners
4. working with others in promoting program interaction and the integration of new and more effective rehabilitation techniques to achieve improved rehabilitation practice

Nine State vocational rehabilitation agencies have received R&D grants to conduct Research Utilization Specialist projects. Currently, RUS projects are operating in the following States: Alabama, California, Massachusetts, New Jersey, Missouri, Texas, Utah, Virginia, and Wisconsin. An updated list of participating States is available from the Division of Research Utilization. (See Appendix D.)

RIS is a major resource of research utilization specialists as well as of rehabilitation practitioners and researchers. The RUSs understand thoroughly the potential benefits of the system and know how to use it effectively. Among the different ways in which they can assist practitioners in taking advantage of RIS are the following:

1. Delineating the problem, that is, pinpointing the problem to which knowledge from effective research findings could be applied
2. Retrieval of information
   a. simple dissemination—identifying and sending reports and abstracts in the area of need
   b. complex dissemination—identifying, reviewing, and making a critical summary of the relevant literature
3. Planning and placing a pilot demonstration of research findings
   a. identifying research which responds to the problem
   b. developing a strategy for responding to the problem
   c. securing the resources for implementing the response (demonstration project, field test, pilot) to the problem
   d. setting up a method for evaluating the pilot demonstration
4. Stabilizing the innovation

It must be remembered, however, that the RUS' primary responsibility is to the State in which his project is operating. As a result, his time for outside consultation is extremely limited.

MATERIALS DEVELOPMENT CENTER

A Materials Development Center (MDC) has been established at the University of Wisconsin—Stout, in Menomonie, Wisconsin. (See Appendix A–3.) Its purpose is to collect, develop, and distribute information and materials which can be used to facilitate the development and improvement of work evaluation and work adjustment programs.

The Center is able to give substantial help to all persons with specific problems in the area of work evaluation or work adjustment. It has a complete information retrieval system with over 3,000 documents. In addition to supplying information to the inquirer, it can send him actual material such as speeches or published articles, on loan. Currently it is developing packaged programs on a variety of subjects, which will be sent to the inquirer upon request.

RESEARCH UTILIZATION LABORATORIES

Research Utilization Laboratories (RUL) have two major purposes: to adapt selected research results so that practical application of them can be made to promote services for target populations; and to disseminate effective research results obtained from all SRS research and demonstration projects, with emphasis on their core areas.

There are at present two RULs in the country. The RUL located at the Jewish Vocational Service in Chicago has the following objectives:

1. To further the development of innovative practices among rehabilitation workshop programs in Region V
2. To increase research utilization among rehabilitation workshop programs in Region V
3. To study the process of research utilization in rehabilitation workshop programs, conducting that study in such a manner as to be able to advise practitioners and research utilization specialists on successful ways to introduce innovations
4. To conduct a series of special studies in which specific, research-based innovations are introduced into workshop programs; and to disseminate information on how other programs can adopt the same innovations

The specific areas in which JVS-RUL has conducted field demonstrations and developed manuals are:

1. Observation of client's behavior in workshops in relation to evaluation of client's assets and limitations
2. Relations with community employers in improving the effectiveness of rehabilitation programs
3. Role playing as a technique for increasing work adjustment

The JVS–RUL is also scheduled to conduct a field demonstration in the area of eliciting and utilizing information for clients on the meaning of work.

The other Research Utilization Laboratory is located at the ICD Rehabilitation Research Center in New York City. Its present focus is on the rehabilitation of disabled public assistance clients. The objectives of the ICD–RUL are:

1. To replicate approved and effective research in a clinical setting
2. To provide a research and training base for State agencies for the development of programs under Public Assistance/Vocational Rehabilitation Expansion Grants
3. To operate a national information center concerning the vocational rehabilitation of disabled public assistance recipients

At present the work of the ICD–RUL Information Center on PA/VR is directed toward the SRS Expansion Grant Program. In this capacity it publishes a newsletter and a classified holdings list of literature and documents relevant to joint PA/VR projects. It also supplied related documents, reprints, and bibliographies, and conducts information searches for State agency personnel having project planning responsibilities within the program. Every year the laboratory hosts numerous professional meetings and training seminars.

SPECIAL RESEARCH CENTERS

Two types of research centers are described here: the SRS Regional Rehabilitation Research Institute (RRRI) and the Regional Research Institute for Social Welfare (RRISW), and the Rehabilitation Research and Training Center.

SRS Regional Research Institutes

The functions of the RRRIs (see Appendix A–2) and RRISWs (see Appendix B) are similar. More specifically, each Institute is responsible for the conduct of research in a core topic area and the provi-

sion of research-related assistance to State, regional, and central SRS offices.

A person who anticipates utilizing an RRRI or RRISW for assistance in solving a problem should become familiar with the core areas of research of each Institute and a sample of the research monographs which each has published. Research staff in any of the institutes can offer technical assistance in the areas of research design, statistics, and methodology. However, they have special expertise in the research design appropriate to their own core areas of research. These staff not only can provide literature but also can assist in interpretation of the literature and the ways in which it might help in the design of alternative solutions to the problem. Furthermore, they can show how a given solution might be field tested and evaluated.

Rehabilitation Research and Training Centers

Presently, there are 18 Rehabilitation Research and Training Centers in the country. (See Appendix C.) These centers can be categorized into four broad areas: medicine, vocational rehabilitation, mental retardation, and deafness.

The person interested in using a Research and Training Center as a resource in dealing with a problem should obtain a copy of the *Research Directory of the Rehabilitation Research and Training Centers.* (See Appendix E.) This publication lists the location of each R&T Center and shows the type of applied research in which it is engaged. Various research projects are briefly described. The user of the Directory will be able to identify easily the R&T Center and the specific principal investigators who have acquired experience relevant to the problem at hand. If he wishes, he may send for pertinent project reports. He may also call upon a principal investigator as a consultant to assist him more directly in dealing with the problem.

VI. THE SYSTEM AS AN AID TO PROBLEM SOLVING: SOME EXAMPLES

Everyone in the helping professions is an audience for RIS. This includes health, education, welfare, and rehabilitation agencies; rehabilitation-related associations and organizations; rehabilitation facilities and hospitals. (See chart, p. 14) In each of these are administrators, program planners, counselors, legislators, therapists, prosthetists, physicians, educators, training staff, social workers, inservice coordinators, and students who can benefit from RIS. Each of these individuals is interested in doing his job more efficiently and more economically. Therefore, information reflecting innovative programs, more modern techniques, feasibility studies, state-of-the-art monographs, methodology, and program evaluations are grist for the mill of the helping professional. RIS offers material encompassing these areas and makes the materials available to the rehabilitation-related audience.

ADMINISTRATORS

For the administrator, RIS can be a helpful tool in providing content and in outlining procedures for effective service delivery. Some areas of concern to the administrator for which he may find help in RIS are policy formulation, decision-making, long- and short-range planning, statistical studies, program justification, personnel staffing, and program monitoring and evaluation. Here is how the system was used to respond to one administrator's felt need.

Stated Problem: What should be the function of the paraprofessional in rehabilitation?

Response: Some of the studies identified from RIS as having significance were:

RD–1630—*The Wyoming Aide Project*
RD–1982—*Union Counselor Rehabilitation Demonstration Project*
RD–1922—*Vocational Rehabilitation of Culturally Disadvantaged, Emotionally Disturbed Persons, Featuring Indigenous Aides*

PROGRAM PLANNERS

Program planners will find in RIS foundation materials for reference in the development of new programs and perspectives on ongoing activities. RIS can respond to the need for information on a variety of specific disability groups and client populations that may be a focal point for program development. It can also conserve effort by suggesting programs of demonstrated utility. Program planners can find information on demographic data, cost-effectiveness, goals of independent living, feasibility studies, program and project justification, and program and staff development.

Planners have given the following examples of problems for which RIS has been utilized.

Stated Problem: What vocational rehabilitation programs have been developed to meet the needs of the welfare recipient?

Response: A search of RIS yielded many projects such as the following:

RD–1333—*Rehabilitation of Disabled Recipients of Public Assistance Grants or Those Whose Children are Recipients* (Arkansas)
RD–1417—*Vocational Rehabilitation of Disabled Public Assistance Clients* (Georgia)
RD–1206—*Vocational Rehabilitation of Disabled Public Assistance Clients* (New Jersey)
RD–1513—*The San Antonio Rehabilitation Welfare Report on Research and Demonstration Project* (Texas)

RD–1323—*Vocational Rehabilitation of Disabled Public Assistance Clients: An Evaluation of Fourteen Research and Demonstration Projects*

Stated Problem: A rehabilitation program is needed in this State's correctional institution. Are there any innovative materials to make it the best program in the country?

Response: RIS final reports and abstracts were assembled on seven Federal Offenders Rehabilitation Projects in Pennsylvania, Georgia, Washington, Texas, Colorado, Illinois, and Florida (RD–2077, 2078, 2079, 2080, 2081, 2083, 2186). In addition, the following were provided: 12–55093, *Lawyers in Corrections and Rehabilitation*, and RD–1709, *Rehabilitation of Public Offenders.*

TRAINING OFFICERS

RIS can serve as one of the basic resources for the training officer. Documents listed under a given area of interest can aid the trainer substantially in developing course content based on latest state-of-the-art practices and concepts. In addition, these materials can be assembled into a source document and distributed to trainees to serve as a "text" or as supplementary reading material forming a basis for discussion during the training sessions.

Stated Problem: What material do you have which will help us strengthen the In-Service Training Program?

Response: From RIS, identification was made of the University of Iowa studies in Continuing Education for Rehabilitation Counselors (12–55239). One of the products of this study, *Learning Units on Cassette Tapes*, was obtained for field testing.

PRACTITIONERS

The practitioner works directly with the consumer of his agency's services. Too often, however, he is isolated from general sources of information which would be helpful in his work. RIS provides essential information useful for solving problems in many areas, for example, counseling techniques, coordinating services, uses of community resources, caseload management, specific client needs, practitioners' roles and functions, practitioners' job satisfaction, evaluation of employee performance, job placement, work evaluation techniques, and social security disability insurance programs.

Stated Problem: Can you give me any help on employment of the homebound?

Response: The following studies were selected:

12–55077—*Application of Modern Business Procedures and Equipment in the Employment of the Severely Disabled Homebound Client*

RD–1806—*Project Earning Power*

RD–331—*Home Jobs for the Homebound*

Stated Problem: How do I tell the employer that the epileptic can handle the job adequately?

Response: Literature search identified the following studies from RIS:

RD–1421—*Changing Employment Policies and Attitudes Toward Persons With Epilepsy*

RD–2592—*Evaluation of a Service Program Focused on Vocational Rehabilitation as a Prototype for an Urban Voluntary Epilepsy Agency*

RESEARCHERS

It is a necessary condition for any researcher to know what has already been done in his field of interest. RIS is divided into categories which improve the researcher's chances for finding material which he might otherwise overlook. In fact, RIS is the only compilation of research reports in the SRS research and demonstration program. Sample inquiries have been made in these areas: methodology, previous research designs and outcomes, usage potential, literature reviews, project justifications, identification of consultants, and identification of knowledge gaps. Researchers have also used RIS as a stimulus to creative ideas.

Recent requests reflect the following problems:

Stated Problem: What is the state of the art in Vocational Evaluation?

Response: Literature search revealed many studies in this area. Some summary studies include the following:

631–T–68 *"Think Tank" Workshop on Work Evaluation*

RT–14 *State of the Art in Vocational Evaluation—Report of National Survey* (July 1969)

Stated Problem: I'm interested in the area of halfway houses for the mentally ill. Could you supply

relevant material?

Response: Applicable materials included the following:

RD–571—*A Rehabilitation Program for the Mentally Ill: The Rehabilitation Houses*

RD–1501—*On the Road to Recovery*

RD–122—*Special Facility to Provide Group Living for Post-Hospital Mental Patients Being Assisted in Rehabilitation by Employers' Rehabilitation Planning Committee.*

RD–2054—*Return to the Community of All Chronic Hospitalized Mentally Ill.*

RD–1449—*A Rehabilitation Facility in Transition: A Case History of the St. Louis Halfway House.*

LEGISLATORS

RIS materials can be valuable to the conscientious legislator for many of the same reasons that they are valuable to other users. Within RIS he can gain insight into areas of social concern that urgently demand attention. Costs, disability populations, budget evaluations, and program information are all discussed in terms applicable to the legislator's work.

As the examples above have illustrated, the Research Information System has a wide variety of uses for helping professionals in the rehabilitation community.

APPENDIX A: FIELD TEST STATIONS FOR THE SRS RESEARCH INFORMATION SYSTEM

APPENDIX A–1

Research Utilization Specialists (RUS)

Research Utilization Specialist
Alabama State Department of Education
2129 East South Boulevard
Montgomery, Alabama 36111

Research Utilization Specialist
Massachusetts Rehabilitation Commission
296 Boylston Street
Boston, Massachusetts 02116

Research Utilization Specialist
New Jersey Rehabilitation Commission
Labor and Industry Building
John Fitch Plaza—Room 1005
Trenton, New Jersey 08625

Research Utilization Specialist
136 East South Temple
1200 University Club Building
Salt Lake City, Utah 84111

Research Utilization Specialist
Vocational Rehabilitation Section
State Department of Education
Farm Bureau Building
1616 Missouri Boulevard
Jefferson City, Missouri 65101

Research Utilization Specialist
Texas Rehabilitation Commission
Medical Park Tower
1301 West 38th Street
Austin, Texas 78705

Research Utilization Information Center
Virginia State Department of Vocational Rehabilitation
P.O. Box 11045
4615 W. Broad Street—Room 314
Richmond, Virginia 23230

Research Utilization Specialist
Wisconsin State Division of Vocational Rehabilitation
1 West Wilson Street—Room 720
Madison, Wisconsin 53720

Research Utilization Specialist
Dept. of Rehabilitation
714 P Street, Room 410
Sacramento, California 95814

APPENDIX A–2

Regional Rehabilitation Research Institutes (RRRI)

Director of Research
Regional Rehabilitation Research Institute
Northeastern University
360 Huntington Avenue
Boston, Massachusetts 02115

Core Area: The relationship between motivation and dependency.

Project Director
Regional Rehabilitation Research Institute
901 Lakeshore Towers
University of Florida
Gainesville, Florida 32601

Core Area: Research utilization in rehabilitation and social service fields.

Project Director
Regional Rehabilitation Research Institute
University of Wisconsin
415 West Gilman Street
Madison, Wisconsin 53706

Core Area: Professional functions of rehabilitation counselors.

Project Director
Regional Rehabilitation Research Institute
University of Oklahoma Research Institute
307 West Brooks Street—#6
Norman, Oklahoma 73069

Core Area: Administration and management in State rehabilitation agencies.

Project Director
Regional Rehabilitation Research Institute
University of Missouri
223 S. Fifth Street
Columbia, Missouri 65201

Core Area: Counseling with the underprivileged.

Project Director
Regional Rehabilitation Research Institute
University of Northern Colorado
Greeley, Colorado 80631

Core Area: Rehabilitation service delivery systems in a sparsely populated area.

APPENDIX A–3

Research Utilization Laboratories (RUL)

Project Supervisor
Research Utilization Laboratory
ICD Rehabilitation and Research Center
340 East 24th Street
New York, New York 10010

Core Area: Rehabilitation of the disabled public assistance client.

Project Supervisor
Research Utilization Laboratory
Jewish Vocational Service
One South Franklin Street
Chicago, Illinois 60606

Core Area: Process of research utilization in the rehabilitation sheltered workshop program.

Materials Development Center

Director, Materials Development Center
Dept. of Rehabilitation and Manpower Services
University of Wisconsin—Stout
Menomonie, Wisconsin 54751

Core Area: Work evaluation, work adjustment, and related aspects of the rehabilitation process.

APPENDIX B: REGIONAL RESEARCH INSTITUTES IN SOCIAL WELFARE

Director
Regional Research Institute in Social Welfare
Institute of Human Sciences
Boston College
Chestnut Hill, Massachusetts 02167

Core Area: New ways of organizing delivery services to workers and their families.

Director
Regional Research Institute in Social Welfare
Columbia University
School of Social Work
622 W. 113th Street
New York, New York 10025

Core Area: Issues related to employment training programs for welfare and welfare-prone populations.

Director
Regional Research Institute in Social Welfare
University of Georgia
1260 S. Lumpkin Street
Athens, Georgia 30610

Core Area: Self and family care as it relates to children, with emphasis on protective services to neglected or abused children.

Director
Regional Research Institute in Social Welfare
University of Chicago
969 E. 60th Street
Chicago, Illinois 60637

Core Area: Major issues in welfare policy and the necessary changes in legislation to more effectively deal with the significant problem areas.

Director
Regional Research Institute in Social Welfare
University of Kentucky
Bradley Hall
Lexington, Kentucky 40506

Core Area: Self-support services to complement programmatic research of Boston College and Columbia University.

Director
Regional Research Institute in Social Welfare
University of Texas Medical School
7703 Floyd Curl Drive
San Antonio, Texas 78229

Core Area: Health care services for the poor.

Director
Regional Research Institute in Social Welfare
Institute for Community Studies
301 E. Armour Blvd.
Kansas City, Missouri 64111

Core Area: More effective organization and delivery of services to the central city and ghetto poor.

Director
Regional Research Institute in Social Welfare
University of Denver
21 Spruce Hall
Denver, Colorado 80201

Core Area: Social and economic problems, social policy issues, and service delivery systems in sparsely settled areas.

Director
Regional Research Institute in Social Welfare
University of Southern California
3965 S. Vermont Ave.
Los Angeles, California 90037

Director
Regional Research Institute in Social Welfare
Portland State University
School of Social Work
Portland, Oregon 92707

Core Area: Impact on welfare clients of alternative systems and subsystems of social services. New mechanisms of financing social services and the relative cost-effectiveness of such services will be an integral consideration.

Core Area: Youth development and juvenile delinquency prevention.

APPENDIX C: RESEARCH AND TRAINING CENTERS

RT-1 Director
New York Univ. (16-56801)
Medical Rehabilitation R&T Center
400 East 34th Street
New York, New York 10016

RT-2 Director
Univ. of Minnesota (16-56810)
Medical Rehabilitation R&T Center
860 Mayo Building
Minneapolis, Minnesota 55455

RT-3 Director
Univ. of Washington (16-56818)
Medical Rehabilitation R&T Center
15th Avenue, N.E.
Seattle, Washington 98105

RT-4 Director
Baylor Univ. (16-56813)
Medical Rehabilitation R&T Center
1333 Moursund Avenue
Houston, Texas 77025

RT-6 Director
Emory Univ. (16-56808)
Medical Rehabilitation R&T Center
80 Butler Street, S.E.
Atlanta, Georgia 30303

RT-7 Director
Tufts Univ. (16-56800)
Medical Rehabilitation R&T Center
185 Harrison Avenue
Boston, Massachusetts 02111

RT-8 Director
Temple Univ. (16-56804)
Medical Rehabilitation R&T Center
Krusen Research Center
12th and Tabor Road
Philadelphia, Pennsylvania 19141

RT-9 Director
George Washington Univ. (16-56803)
Medical Rehabilitation R&T Center
Medical Center
2150 Pennsylvania Avenue, N.W.
Washington, D.C. 20037

RT-10 Director
Univ. of Colorado (16-56815)
Medical Rehabilitation R&T Center
School of Medicine
4200 E. Ninth Avenue
Denver, Coloralo 80220

RT-11 Director
Univ. of Wisconsin (16-56811)
Mental Retardation R&T Center
School of Education
415 W. Gilman Street
Madison, Wisconsin 53706

RT-13 Director
Univ. of Arkansas (16-56812)
Arkansas Rehabilitation R&T Center
346 N. West Ave.
Fayetteville, Arkansas 72701

RT-15 Director
Univ. of West Virginia (16-56806)
West Virginia Rehabilitation R&T Center
Institute, West Virginia 25112

RT-16 Director
Univ. of Oregon (16-56817)
Mental Retardation R&T Center
College of Education
306 Clinical Services Building
Eugene, Oregon 97403

RT-17 Director
New York Univ. (16-56802)
N.Y.U. Deafness Rehabilitation R&T Center
80 Washington Square
New York, New York 10003

RT-18 Director
Univ. of Southern California (16-56816)
Medical Rehabilitation R&T Center
Room 102—North Hall
1739 Griffin Avenue
Los Angeles, California 90031

RT-19 Director
Univ. of Alabama (16-56807)
Medical Rehabilitation R&T Center
1717 Sixth Avenue, South
Birmingham, Alabama 35233

RT-20 Director
Northwestern Univ. (16-56809)
Medical Rehabilitation R&T Center
Rehabilitation Institute of Chicago
401 E. Ohio Street
Chicago, Illinois 60611

RT-21 Director
Texas Tech Univ. (16-56819)
Mental Retardation R&T Center
School of Arts and Sciences
Lubbock, Texas 79409

RT-22 Univ. of Wisconsin—Stout (16-56821)
Vocational Rehabilitation R&T Center
Menomonie, Wisconsin 54751

APPENDIX D: OTHER INFORMATION RESOURCES

ERIC Information Retrieval Center on the Disadvantaged
Teachers College
Columbia University
P.O. Box 40
120th Street and Amsterdam Avenue
New York, New York 10027

ERIC Counseling and Personnel Services Clearinghouse
School of Education
University of Michigan
Ann Arbor, Michigan 48104

National Technical Information Service
U. S. Department of Commerce
Springfield, Virginia 22151

MEDLARS, National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014

Division of Research Utilization
Social and Rehabilitation Service
Department of Health, Education, and Welfare
330 C Street, S.W.
Washington, D.C. 20201

Special Centers Branch
Division of Rehabilitation and Employability Research
Social and Rehabilitation Service
Department of Health, Education, and Welfare
Washington, D.C. 20201

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